

Title (en)

TRANSMITTING DEVICE, RECEIVING DEVICE, TRANSMITTING METHOD AND RECEIVING METHOD

Title (de)

SENDEVORRICHTUNG, EMPFANGSVORRICHTUNG, SENDEVERFAHREN UND EMPFANGSVORFAHREN

Title (fr)

DISPOSITIF DE TRANSMISSION, DISPOSITIF DE RÉCEPTION, PROCÉDÉ DE TRANSMISSION, ET PROCÉDÉ DE RÉCEPTION

Publication

**EP 3499754 B1 20240214 (EN)**

Application

**EP 17839277 A 20170801**

Priority

- US 201662374227 P 20160812
- JP 2017027831 W 20170801

Abstract (en)

[origin: EP3499754A1] A transmission device includes: a first mapper that maps a first bit stream of a first data series to generate a first modulated symbol stream of the first data series; a second mapper that maps a second bit stream of a second data series to generate a second modulated symbol stream of the second data series; a converter that subjects the second modulated symbol stream to conversion in accordance with the first modulated symbol stream in only a first direction among the first direction and a second direction perpendicular to each other in a complex plane; and a superposer that superposes the first modulated symbol stream and the second modulated symbol stream subjected to the conversion in accordance with the first modulated symbol stream at a predetermined amplitude ratio to generate the multiplexed signal; and a transmitter that transmits the multiplexed signal.

IPC 8 full level

**H04J 99/00** (2009.01); **H04J 7/02** (2006.01); **H04J 13/00** (2011.01); **H04L 27/26** (2006.01); **H04L 27/34** (2006.01)

CPC (source: CN EP US)

**H04B 1/0475** (2013.01 - US); **H04B 1/10** (2013.01 - US); **H04J 7/02** (2013.01 - US); **H04J 13/0003** (2013.01 - EP US); **H04L 27/20** (2013.01 - CN); **H04L 27/3488** (2013.01 - EP US)

Citation (examination)

- EP 3439209 A1 20190206 - PANASONIC IP CORP AMERICA [US]
- US 2018035390 A1 20180201 - NAKAMURA OSAMU [JP], et al
- WO 2016114359 A1 20160721 - SHARP KK [JP]

Cited by

US11843488B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 3499754 A1 20190619**; **EP 3499754 A4 20190904**; **EP 3499754 B1 20240214**; CN 109565348 A 20190402; CN 109565348 B 20210810; CN 113595953 A 20211102; CN 113595953 B 20231003; JP 6929851 B2 20210901; JP WO2018030204 A1 20190606; US 10567016 B2 20200218; US 10833713 B2 20201110; US 11184041 B2 20211123; US 2019173502 A1 20190606; US 2020136662 A1 20200430; US 2021013913 A1 20210114; WO 2018030204 A1 20180215

DOCDB simple family (application)

**EP 17839277 A 20170801**; CN 201780048290 A 20170801; CN 202110816410 A 20170801; JP 2017027831 W 20170801; JP 2018532949 A 20170801; US 201916270930 A 20190208; US 201916731573 A 20191231; US 202017036622 A 20200929